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Chronology Related to Causation

(External)

- January 4, 1954

  ✓Frank Statement – Did not regard recent reports that theorized cigarette smoking was in some way linked to lung cancer as conclusive. The statement acknowledged the work of other scientists and doctors that questioned these findings. In this statement, the major tobacco manufacturers and growers pledged aid and assistance to the research efforts of a committee known as the "Tobacco Industry Research Committee" into all phases of tobacco use and health. In particular, the Committee was to examine the alleged relationship between the use of tobacco and lung cancer. An Advisory Board consisting of scientists with no interest in the cigarette industry advised the committee on its research activities.

- May 21, 1954

  ✓O. Parker McComas, President of Philip Morris to the Society of Security Analysts, Chicago, Illinois
  "The 'health factor' has always been one of great concern to the tobacco industry, because the industry has on occasion been challenged on the subject of smoking and health." ... "This publication [A Scientific Perspective on the Cigarette Controversy] contained a summation of the considered opinions of many men of science on the subject of smoking and lung cancer. Briefly, their thoughts on the matter said much by saying little. "

- July 13, 1954

  ✓O. Parker McComas, President of Philip Morris before the Annual Stockholders Meeting
  "In the current health controversy neither I nor anyone else knows what the scientists will finally find out about the constituents that make up our final product. I know that many doubts exist in scientific circles as to whether there may be elements present in tobacco smoke that are injurious to health.. Certainly, no conclusive laboratory tests have proved any relationship between cigarettes and the health of human beings."

- April 9, 1957

  ✓O. Parker McComas, President of Philip Morris before the Annual Meeting of Stockholders
  "From the great medical institutions and laboratories of the world where the problem is being approached from every conceivable angle, we have seen no evidence to controvert our belief that the use of tobacco is harmless to the average human being".

- May 27, 1957

  ✓George Weissman, Vice President of Philip Morris to the Burley Auction Warehouse Association
  "Without rehashing the arguments, I'll merely assert that there is not one shred of conclusive evidence to support the link between cigarette smoking and lung cancer – certainly a lot less than the evidence concerning the inhalation of exhaust fumes from the automobiles driven around New York City or the smog fumes in Los Angeles. We in the Industry are prepared to follow the dictates of the research people when they tell us what the needs are to produce the BEST cigarettes for our consumers. We've always maintained that as our primary goal and we are certainly going to continue to do so."

- April 8, 1959

  ✓Joseph F. Cullman, 3rd, President, Philip Morris at the Annual Stockholder's Meeting in Richmond, VA
  "It is encouraging to note the large and growing number of serious deep-thinking researchers, who, after studying the reports of the extensive research being conducted into the nature of tobacco smoke and its effects, have concluded that tobacco smoke should not at this time be considered a serious factor affecting human health and longevity. Statistical studies on longevity that study only smoking habits without giving weight to other similarities of habits or other factors cannot be considered conclusive and can be most misleading."

- April 12, 1960

  ✓Joseph F. Cullman, President, Philip Morris before the Annual Meeting of Stockholders
  "We continue to support the Tobacco Industry Research Committee as we have since the inception of that organization. They have invested more than $4,000,000 in research designed to determine the relationship—if any—between cigarettes and human health."

- June 28, 1960

  ✓Joseph F. Cullman, President, Philip Morris before the New York Society of Security Analysts
  "Six years ago we experienced the beginning of considerable publicity about claims that a statistical relationship had been reported between the incidence of recorded lung cancer and the increase in cigarette smoking in this country..

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Today we see the same statistics being used again and again. ... The statistical studies, of course, do not and cannot prove a cause and effect relationship between smoking and lung cancer. And the most frequently mentioned of these studies do not even claim that they do. THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION said last December that there is insufficient evidence to warrant the assumption that cigarette smoking is a causative factor in the increase in lung cancer."

... Research has shown that many factors including air pollutants may be involved in the causation of lung cancer. It is unwise and unscientific without proof to single out any one factor."

- November 15, 1961
  ✓ Tobacco and Health—R & D Approach
  H. Wakeham, Vice President to Research and Development Committee, New York, NY
  Topics included the following: Chemistry of Cigarette Smoke; the Cancer Controversy; Smoking and Cardiovascular Diseases; R & D Program Leading to a Medically Acceptable Cigarette.

- April 10, 1962
  ✓ Statements by Joseph Cullman, 3rd following remarks made at a Stockholders Meeting. The statements were made to a request that he comment on the cigarette and health controversy.
  "Scientists are giving increasing attention to air pollution, to the virus theory, to previous lung damage and to dietary, hereditary and environmental factors. This fact stands out – people are living longer and are therefore more subject to diseases of old age and still 99% of smokers never contract carcinoma of the lungs while many non-smokers do. ... So far, there is no clinical proof to support the theory that smoking causes carcinoma of the lung. There is evidence that smoking has pharmacological and psychological effects that are of real value to smokers."

- May 24, 1962
  ✓ Phenols in Tobacco: A Rundown by KA.
  A summary of information on the carcinogenicity of phenol is presented. Conclusion is "...to date, the phenolic fraction of cigarette smoke alone has not yet produced cancer or even papillomas in animals. Phenol in pure form has, but slightly."

- December 31, 1962
  ✓ Statistical Problems
  A list of statistical problems regarding cancer associations and smoking is presented. Authorship is unknown. The outline includes the following: a. How much of the increase is real; b). Non-supporting associations in relation to smoking habits; c) Conflicting data; and d). Evidence against carcinogenic effect.

  ✓ Statistical Problems in Lung Cancer
  An outline of statistical problems in associations with lung cancer is written. This may be a later version of the above draft. Author is not indicated. Outline included several topics such as: General magnitude of lung cancer problem; Cohort studies; Sources of bias; Absence of statistical relation of cigarette smoking to cancers of hands, lips, trachea, larynx, buccal cavity; Type of lung cancer vs. smoking; and Statistical correlations do not equal causation (direct).

- October 24, 1963
  ✓ Memo from H. Wakeham to H. Cullman outlining "areas where the cigarette industry might be most subject to criticism and suggesting elements in smoke which might be most accused by either the medical profession or exploited by our competitors."

- October 28, 1964
  ✓ Operations Department Presentation to Philip Morris Board of Directors
  The report addressed what the authors defined as the principal problem facing the Industry – the question of Smoking and Health. Objective to develop products having maximum consumer appeal in the light of the current and future health conscious market place. Action was in anticipation of a health crisis precipitated by the Smoking and Health Report of the Surgeon's General's Committee. Conclusions expressed were:

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1. ... "the industry must find a way to make an effective technical rebuttal to the arguments of the anti-cigarette forces."
2. "Secondly the government and private agencies would intensify their technical activities on the smoking and health question to protect their monetary and political interests. The Industry to avoid excessive regulation and to maintain its competitive independence would have to do likewise.
3. "Third, these research efforts would in all likelihood lead sooner or later to cigarettes generally regarded as 'less harmful; than others. Philip Morris to maintain its competitive position would have to have on its shelf for introduction products substantially better physiologically ..."

... "All these efforts underscore the broad and serious attempts to eliminate what are generally believed to be harmful aspects of cigarette smoke."

- November 27, 1967
  ✓Memorandum from T.S. Osdene to R.D. Carpenter re: All-Burley Cigarette
  The memorandum indicates that "The results from our recently concluded skin-painting experiment, together with several reports in the literature, show that smoke from cigarettes containing only burley tobacco is less toxic and less tumorigenic to rodents than smoke from flue-cured or blended cigarettes."

- February 6, 1968
  ✓Statement by and qualifications of C.H. Hine, a clinical professor of Pharmacology and Preventive Medicine in the School of Medicine, University of California at San Francisco. Made perhaps as part of a legal presentation.
  With reference to tars and anticarcinogens, "The Surgeon General's report and several other prospective and retrospective studies have strongly implicated an association between heavy smoking and lung cancer. A number of bio-statisticians and physicians have, however, questioned this. Brownlee has raised the question of the genetic effect which had not been accounted for in previous studies. Berkson challenged the findings, stating that excess deaths among smokers due to lung cancer was only 10-15% expected – and that there occurred similar percentages due to other cancers, including those of the bladder and prostate, which would not rationally be connected with smoking habits."

- April 9, 1968
  ✓Presentation by Joseph F. Cullman, 3rd to the Annual Meeting of Stockholders in Richmond, VA.
  Mr. Cullman cited an editorial published in the New York Daily News which reported that "New York City's Sloan-Kettering Institute for Research comes up with a most interesting report on viruses as possibly the basic causes of cancer." He further states, "I am personally convinced that cigarettes will ultimately be exonerated."

- April 23, 1969
  ✓Joseph H. Cullman, 3rd, chairman of Philip Morris, Inc. before the House Committee on Interstate and Foreign Commerce.
  In response to a question regarding the rationale used by the Industry in opposing the tar and nicotine statement, Cullman responded, "there is no scientific basis that a greater or lesser amount of tar and nicotine is of significance." He said "there are some 2,000 components in cigarette smoke, and that the Surgeon General had not been able to identify a single one as causing any disease. Thus, 'tar' and nicotine listings, would not provide the public with meaningful information."

- October 1, 1979
  ✓Memorandum from Gina Gallovich re: Cancer: Myths and Realities of Cause and Cure
  The memo reviews the above-titled book written by Drs. Kothari and Metha, According to the memo, the authors', main thesis is that "cancer is a discernable universal feature that is independent of the presumed carcinogens, and is impartial in its global way. Cancer is a part and parcel of mankind." In sum, the authors state that "the realization that cancer is not caused, and therefore, is not preventable, is a mixed blessing. ... The bitter part is that ... one in five would always be doomed to cancer, no matter what..."

- December 5, 1979
  ✓Manual on "company's position on various matters in light of the controversy over smoking and health." The manual indicates that "...an examination of the available scientific evidence shows that the relationship between smoking and health is based primarily on studies reporting statistical associations between smoking and disease. These statistical associations cannot establish a cause-and-effect relationship. The most that such data can do is to indicate areas for further specific scientific research."

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- October 10, 1988
  ✓(Draft) Cigarettes, lung cancer and all cause mortality: A dissenting view.
  Draft of a paper that received approval for submission to the American Journal of Epidemiology.

- 1990
  Stockholder letter by Hamish Maxwell, Chairmen of the Board and Chief Executive Officer
  "Many experts and studies – including those cited by the U.S. Surgeon General and the U.S> Environmental Protection Agency – remain divided over the relationship between environmental tobacco smoke and human health."

- 1991
  Stockholder letter by Michael A. Miles, Chairman of the Board and Chief Executive Order and William Murray, President and Chief Operating Officer.
  "Tobacco use is one of the most widely discussed health issues around the world. Given the general availability of information concerning that issue, we regard smoking as a voluntary lifestyle decision that need not be subjected to new marketing or use restrictions."

- May 30, 1991
  ✓The S & T Seminar: Review of the Scientific Developments in the Fields Related to Smoking & Health Since 1950 and an Outlook in the Future (Programme).

- October 7, 1997
  ✓Hatch Statement
  The statement is Philip Morris' response to the Senate Committee on Judiciary. The statement indicated, "We recognize that there is a substantial body of evidence which supports the judgement that cigarette smoking plays a causal role in the development of lung cancer and other diseases in smokers. We previously have acknowledged that the strong statistical association between smoking and certain diseases, such as lung cancer and emphysema, establishes that smoking is a risk factor for and, in fact may be a cause of those diseases. For example, of all the risk factors for lung cancer that have been identified, none is more strongly associated with the disease, or carries a greater risk, than cigarette smoking; a far greater number of smokers than non-smokers develop lung cancer."

  ... "in order to ensure that there will be a single, consistent public health message on this issue, we will refrain from debating the issue other than as necessary to defend ourselves ..."

- December 8-10, 1998
  The Castle Meeting held in Tarrytown, NY.
  The meeting consisted of a series of technical discussions regarding the area of causation. Topics presented included the following: Epidemiology – Use of cause and effect: Bradford Hill Criteria; Low tar epidemiology; Animal testing: Use to estimate risk: Mechanistic studies; and Criteria necessary to prove causation.

- December 18, 1999
  Causation Meeting:: Focusing on the Science vs. Law or Policy
  The need to discuss causation in terms of various aspects was examined. These included: Product change; Informing the consumer; Legal issues; and public health. Outcomes of the meeting included the compilation of a historical view of activity related to the company position on causation and the development of a Scientific Consensus group.

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(External)

- 1950
  ✓Wynder E, Graham E. Tobacco smoking as a possible etiologic factor in bronchiogenic carcinoma. JAMA 1950; 143: 329-36.

- September 30, 1950
  ✓ Doll, R. and Hill, A.B. Smoking and Carcinoma of the lung: Preliminary Report. British Medical Journal 2:739-748.
  "To summarize, it is not reasonable, in our view to attribute the results to any special selection of cases or to bias in recording. In other words, it must be concluded that there is a real association between carcinoma of the lung and smoking. ... This is not necessarily to say that smoking causes carcinoma of the lung. The association would occur if carcinoma of the lung caused people to smoke or if both attributes were end-effects of a common cause. ... We therefore conclude that smoking is a factor, and an important factor, in the production of carcinoma of the lung."

- 1952
  Doll, R. and Hill, A.B. A study of the aetiology of carcinoma of the lung. British Medical Journal 2:1271-1286.

- December 1953
  ✓Wynder, E.L., Graham, E.A., and A.B. Croninger. Experimental Production of Carcinoma with Cigarette Tar. Cancer Research 13(12):53.-64.

- 1954
  Doll, R. and Hill, A.B. The mortality of doctors in relation to their smoking habits: A preliminary report. British Medical Journal. 1:1451-1455.

- April 14, 1954
  "A Scientific Perspective on the Cigarette Controversy" - Issued by the Tobacco Research Committee. A compendium containing quotations and statements by 36 distinguished cancer authorities denying proof establishing a link between smoking and lung cancer.

- August 7, 1954
  Hammond, E.C. and Horn, D. Relationship between human smoking habits and death rates: Follow-up study of 187, 766 men. JAMA. 155:1316-1328
  "It was found that men with a history of regular cigarette smoking have a consistently higher death rate tan men who had never smoked or men who have smoked only cigars or pipes."

- 1956
  Doll, R. and Hill, A.B. Lung cancer and other causes of death in relation to smoking: A second report on the mortality of British doctors. British Medical Journal 2:1071-1081.

- July 12, 1957
  Ca, Bulletin of Cancer Progress 8 (March-April) 44.
  Statement by Surgeon General Burney on behalf of the Public Health Service which called excessive smoking one of the causative factors in lung cancer.

- March 6, 1957
  ✓Report of Study Group on Smoking and Health
  Publication of a report by a study group formed by the American Cancer Society, the American Heart Association, the National Cancer Institute and the National Heart Institute to review the effects of tobacco smoke on Health and to make recommendations. The study group reported that "The sum total of evidence establishes beyond reasonable doubt that cigarette smoking is a causative factor in the rapidly increasing incidence of human epidermoid carcinoma of the lung." Further, the vigorous pursuit of research on smoking and health was recommended.

- June 4, 1957
  Presentation of Hammond and Horn report at the American Medical Association meeting in New York entitled, "Smoking in Relation to Death Rates".

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- December 1957
  Presentation by Harold F. Dorn entitled, "The Mortality of Smokers and Non-smokers" at the Proceedings of the Social Statistics Section at the American Statistical Association meeting.

- March 8, 1958
  ✓Hammond, E.C. and Daniel Horn. Smoking and death rates-Report on Forty-four months of follow-up of 187,783 men. I. Total Mortality. JAMA 166(10): 1159-1172.
  "Age being taken into consideration, the death rate of men with a history of regular cigarette smoking was found to be 68% higher than that of a comparable group of men who had never smoked. The death rate of cigarette smokers increased with the amount of cigarette smoking. Among men with a history of regular cigarette smoking only, the death rate of those smoking two or more packs of cigarettes a day in 1952 was 123% higher than that of men who had never smoked."

- March 15, 1958
  Hammond, E.C. and Daniel Horn. Smoking and death rates-Report on Forty-four months of follow-up of 187,783 men. I. Death rates by cause. JAMA 166(10): 1159-1172.

  "The most important finding of this study was the high degree of association between cigarette smoking and the total death rate."

- 1958
  Cigarette smoke and cancer of the lung by R.D. Passey. British Empire Cancer Campaign. Annual Report No 36, part 2, The Scientific Report, pp 48-49.

- January 1959
  ✓Smoking and lung cancer: Recent evidence and a discussion of some questions by Cornfield, J., Haenszel, W., Hammond, E.C., Lilienfeld, A.M., Shimken, M. and E. Wynder, Journal of the National Cancer Institute 22:173-203.
  A review on epidemiologic and experimental findings on the relationships of tobacco smoking to lung cancer was presented. According to the report, "The magnitude of excess lung-cancer risk among cigarette smokers is so great that the results can not be interpreted as arising from an indirect association of cigarette smoking with some other agent or characteristic, since this hypothetical agent would have to be at least as strongly associated with lung cancer as cigarette use; no such agent has been found or suggested. The consistency of all the epidemiologic and experimental evidence also supports the conclusion of a causal relationship with cigarette smoking, while there are serious inconsistencies in reconciling the evidence with other hypotheses that have been advanced. Unquestionably, there are areas where more research is necessary, and, of course, no single cause accounts for all lung cancer."

- November 28, 1959
  ✓(Missing Pages) Burney, L.E. Smoking and lung cancer: A statement of the Public Health Service. JAMA 171(13): 1829-37.
  The Surgeon General called smoking the principal etiological factor in the increased incidence of lung cancer.

- June 22, 1960
  ✓Smoking and cancer of the lung – Presented by Joseph Berkson at the Symposium on the Physiologic and Pathologic Aspects of Smoking. Proceedings of the Staff Minutes of the Mayo Clinic. 35: (13): 337-385.
  "In my own opinion, all available relevant facts considered, it seems very doubtful that smoking causes cancer of the lung. ... The cause of cancer is fundamentally not a statistical question, but a biologic one. Statistics, if critically and carefully used, can provide useful 'leads,' but the definitive investigations must come from the biologic sciences, pathology, pharmacology, chemistry and so forth. All of them together must be brought to bear on the problem, if we are to answer the specific question oat hand, and the many other questions that are involved. For we will not really know whether smoking causes cancer, till we know at least something in a precise way about *how* it causes cancer."

- June 15, 1961
  Wynder, E.L. An appraisal of the smoking-lung-cancer issue. The New England Journal of Medicine 264(24): 1235-1240.

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- August 17, 1962
  ✓ Smoking and Health: An Analysis. Tobacco Institute of RC analysis of Royal College of Physicians' Report.
  "The authors of the R.C.P. report gives insufficient weight to the steadily growing body of evidence tending to show that many factors other than tobacco may be involved in lung cancer causation. They dismiss, with brief mention, experimental and laboratory research that does not show a causative role for tobacco smoke in lung cancer."

- October 18, 1962
  Article published in Archives of Pathology that discussed various factors under study and provided the appraisal by a six-man scientific team on the "cigarette theory of lung cancer causation."

- April 1, 1963
  Current status of studies on smoking and health. Prepared for the Surgeon General's Advisory Committee on Smoking and Health by the Research Department of Liggett & Myers Tobacco Company and Arthur D. Little, Inc. The report found that "much of the work relating cigarette smoking to death rates or lesser impairments to have been unreliably conducted, and even some of the otherwise better-conducted studies, inadequately analyzed." ... "Nevertheless, we find enough of the results relating cigarette smoking to death rates to have been obtained in studies adequately meeting our standards for sound inquiry and analysis to satisfy is with respect to the over-all conclusion that a gross statistical association exists between cigarette smoking and over-all death rates."

- 1964
  ✓ Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service
  (See separate notebook)

- January 1964
  ✓ The Maxwell Report: A Statistical Survey of the Cigarette Industry (Missing page)

- March 5, 1964
  ✓ Summary of Dr. Hocketts' comments by the Council for Tobacco Research
  This document discusses the Report of the Surgeon General's Advisory Committee on Smoking and Health. The document indicates that after consulting a considerable number of statistical experts about the Report that "Nearly all these are in agreement that the associations of disease incidence with cigarette smoking must be accepted as established. They do not accept that any re-study or re-casting of the present data will destroy the associations. They do not think that any errors in mathematical method will be found. They all agree, however, that much remains to be learned about these associations, particularly the extent to which they indicate causality."

- November 21, 1966
  ✓ Presentation by Vincent Lisanti, Scientific Associate for The Council for Tobacco Research –U.S.A. Delivered before The Tobacco Growers' Information Committee.
  He states that "Cigarette smoking simply does not fall into a picture of a simple cause-and-effect relationship s an explanation of lung cancer." He then presents several facts that he indicates need to be considered in examining the problem of lung cancer.

- 1967
  Wynder, E.L. and D. Hoffman. Studies in Experimental Carcinogenesis. New York: Academic Press.

- February 5, 1970
  ✓ Effects of cigarette smoking upon dogs. Presented by E.C. Hammond and Oscar Auerbach at the American Cancer Society meeting.
  The authors indicated that the "mortality of the dogs in relation to cigarette smoking parallels the finding in epidemiological studies that death rates are far higher in cigarette smokers than in non-smokers and increase with amount of cigarette smoking."

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- February 21, 1974
  ✓Does smoking cause lung cancer. New Scientist. By Philip Burch
  Dr. Burch, a medical physicist "once accepted the conventional view that lung cancer is almost entirely due to smoking outlines the evidence that forced him to change his mind." Several prominent studies are reviewed and refuted by the author.

- 1976
  Doll, R. and R. Peto. Mortality in relation to smoking: 20 years' observations on male British doctors. Br. Med. J. 2:1525-1536.

- February 28, 1979
  Minority Report: Addendum to the Second Report of the Independent Scientific Committee on Smoking and Health by J. Donald Ball
  Dissenting opinion to report issued by the Independent Scientific Committee on Smoking and Health.

- November 2, 1996
  ✓Where do we go from here in research – Presentation by George E. Moore and Ronald Vincent to an Smoking and Health Ad Hoc Committee at the American Public Health Association meeting in San Francisco.
  "The association between lung cancer and cigarettes has been firmly established by multidirectional research." ... "in all probability if current statistics hold true, the relationship of heart disease and smoking is much more damaging." ..."Heart disease is the only disease that ranks greater than cancer in incidence, and cigarettes in all probability, are a major precipitating factor." ..."Unlike lung cancer, emphysema has other major causal factors than cigarettes, but the disease is 13 times more prevalent in smokers, than in non-smokers."

  ...Other cigarette related diseases are: cancer of the urinary bladder, stomach ulcers and sinusitis. Although these diseases represent a lesser problem, there are a great many questions associated with this smoking relationship that would prove most interesting under careful and serious investigation." ... "There is however, a great deal about carcinogenesis that we do not know. For example, the ability of tobacco tar to produce cancer exceeds greatly the sum total of the known carcinogenic compounds found to be present in the tar. There is, therefore, other carcinogenic compounds found to be present in the tar."

- November 1, 1997
  ✓Wynder, E.L. Tobacco as a cause of lung cancer: some reflections. American Journal of Epidemiology. 146(9): 687-694.

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